

WHAT IS CLAIMED IS:

1. A light quantity adjusting device  
comprising:

an annular rotary member having a magnetizing  
5 portion in a plane that is parallel to a radial  
direction of the annular rotary member;

an annular coil disposed in an outer diameter  
side or an inner diameter side of the rotary member;

an annular first stator disposed in a direction  
10 that is orthogonal to a radial direction of the  
rotary member, the annular first stator comprising  
first magnetic pole portions that oppose the rotary  
member;

an annular second stator disposed in a  
15 direction that is orthogonal to the radial direction  
of the rotary member, the annular second stator  
comprising second magnetic pole portions that oppose  
the rotary member from an opposite side of the first  
magnetic pole portions; and

20 one or more light controlling members that are  
disposed between the rotary member and the first  
stator and/or between the rotary member and the  
second stator and that move into, and out of, a light  
path according to rotation of the rotary member,  
25 controlling the quantity of light that passes through,  
the light path being a path for light passing  
therethrough opening portions of the rotary member,

the coil, the first stator, and the second stator.

2. A light quantity adjusting device according  
to Claim 1, wherein the surface area of an opening  
5 portion formed in the light path is changed by moving  
the one or more light quantity controlling members  
into and out of the light path.

3. A light quantity adjusting device according  
10 to Claim 1, wherein the one or more light quantity  
controlling members are semitransparent members, and  
the transmittance of the light path is changed by  
moving the one or more light quantity controlling  
members into and out of the light path.

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4. A light quantity adjusting device according  
to Claim 1, wherein the one or more light quantity  
controlling members are formed by using a non-  
magnetic material.

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5. A light quantity adjusting device according  
to Claim 1, further comprising a bobbin that winds  
around the coil, wherein the magnet and the bobbin  
are positioned to be superimposed over their entire  
25 circumferences when seen from a center axial  
direction.